



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**MAIL STOP AF NON-FEE AMENDMENT (PATENTS)**

Applicant: Tavares, Bruce A.  
Application's Title: EMOLLIENT CARRIER GEL  
Serial No.: 10/661,656  
Filed: 12 Sept. 2003 (09/12/03)  
Group Art Unit: 1714 Examiner: PETER SZEKELY  
Docket No.: 4588-00002B

## DECLARATION OF MOLLY JEAN YOONG UNDER 37 C.F.R. 1.132

I, Molly Jean Yoong, residing at 3525 Bloomington Avenue, City of Minneapolis, County of Hennepin, and State of Minnesota, 55407, a citizen of the United States of America, do hereby solemnly declare:

1. I was awarded a Bachelor of Science (Chem. Eng.) degree from The University of Minnesota, in 2000 and in August that year, was employed by Schlumberger Limited where I was involved in oil field exploration and evaluation with the help of a crew for which I was responsible.

In June 2003 I was employed by React-NTI, LLC and am presently its Laboratory Technical Service Coordinator. My responsibilities are to assist in the development of new products as well as to provide customer services on existing products. I routinely make up sample of products in which the main ingredients are waxes and oils, particularly vegetable oils.

2. I have studied, and understand the invention described and claimed in the above-identified Tavares patent application. The thrust of the invention is that, using only a wax and a naturally occurring vegetable oil, the latter in a major proportion by weight relative to the former, one can make a gel which, as formulated in the best mode of the examples illustrated in the Tavares specification, is a gel which is

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visually virtually indistinguishable from petrolatum. Such a gel even has essentially the same feel to the touch (tactile characteristic) as petrolatum. The gel is however unexpectedly stable to heat, relative to petrolatum, as was stated in the specification.

3. I have also studied, and have understood the Deblasi et al U.S. Patent No. 6,036,945, which, taken as a whole, is directed to making a solid composition. It emphasizes that the inclusion of an active ingredient (sunscreen) does not substantially alter its solid state. There is no suggestion in Deblasi et al that any of the ingredients be left out for any reason, and certainly not the sunscreen.

In contrast, the gel is not a solid and is made up of only wax and vegetable oil. There is no suggestion in the application that addition of other ingredients will not substantially change the physical properties of the gel. The physical characteristic of the gel, in its best mode, is to mimic petrolatum. What one does with the gel to modify it when it is used as a carrier is unrelated to the physical properties of the gel claimed.

4. In the appended copy of page 5 from my laboratory notebook for this product, I tested the comparative thermal stability of a gel which has physical properties otherwise virtually indistinguishable from petrolatum, to that of petrolatum. I placed two beakers, one containing 10 ml of gel and a thermometer, the other containing 10 ml of petrolatum and a thermometer, inside an oven heated to 54°C. When the petrolatum liquefied, the temperature was 52°C. The gel in the other beaker was still in the gel state, though upon being pressed, it was softer than at room temperature, as one might expect.

5. Also appended is a copy of page 6 from my laboratory notebook for this product, on which page I have recorded that I duplicated Example 8 from the Deblasi et al patent.

The result was a very stiff, soft crumbly solid with the texture of peanut butter with no oil. The viscosity is too high to measure with a viscometer with a T-bar.

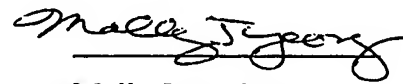
6. On the appended pages 7 – 9 from my laboratory notebook for this product, I have documented the duplication of Example 12 from the Deblasi et al patent; and, also the same example, except that I substituted liquid jojoba oil (this is a different product from the solid into which it is changed when the liquid is hydrogenated).

With the hydrogenated jojoba oil the composition formed was a hard solid. Even when the liquid jojoba oil was substituted for the hydrogenated oil, the end result was a soft solid similar to cream cheese, the viscosity of which cannot be measured with a T-bar.

7. From each of the examples I duplicated from Deblasi et al, which examples appeared most likely to result in the softest products, it is clear to me that they made a liquid only *en route* to making the solid, or near-solid they were interested in. In all cases, they used a relatively large amount of active ingredient, and, as I stated hereinabove, there is no suggestion in the entire disclosure that the active ingredient be left out, for any reason.

The undersigned declarant declares further that all statements made herein of his own knowledge are true, and that all statements made on information and belief are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 10-21-05

  
Molly Jean Yoong

# TITLE Stability at Elevated Temperature PROJECT Emollient Gel Patent Work

Continued from page 1

Goal: Compare the stability of the Tavares gel at 52°C to the stability of commercial standard Petroleum Jelly at 52°C.

## Method:

- ① Oven was heated to 54°C
- ② Approx 10 ml of each gel in a glass beaker placed inside the oven.
- ③ Samples removed when temperature of gel reached 52°C. (measured by Hg thermometer)

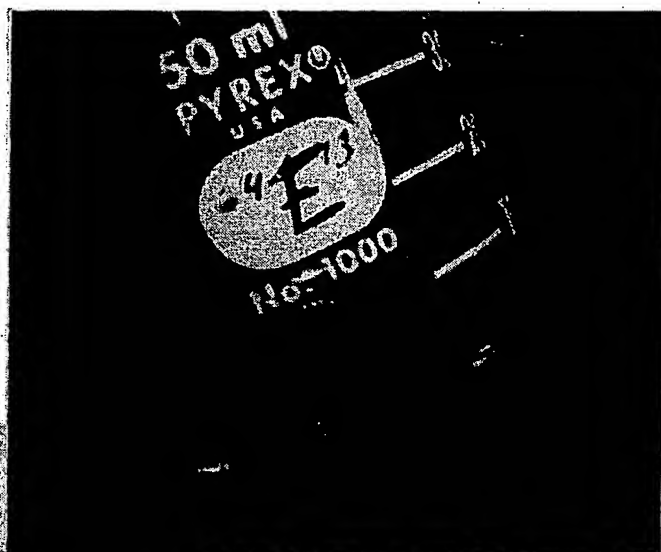
Picture of TAVARES Gel @ 52°C ↓

Result: Vaseline becomes liquid.

Tavares gel maintains its gel state (more stability\* though it has softened)

\* in comparison to Vaseline

Picture of VASELINE Brand Petroleum Jelly at 52°C ↓



TAVARES GEL: BATCH #333502A

VASELINE: BATCH # 06135 H00

Continued to page 1

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9-27-05

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PROPRIETARY INFORMATION

## TITLE Make DeBlassie Ex. #8 PROJECT Emollient Gel Peanut Butter

Continued from page —

GOAL: Duplicate example 8 to examine product texture

## ① Mix ingredients

	Regard	Actual
Ethylene bisstearamide	25%	4.98g
Ethyl ferulate	25%	4.98g
(Ethyl 4-hydroxy-3-methoxycinnamate)		
Polydecene	50%	9.96g

② beaker placed in hot water bath - heat  
with stirring 30 min to  $140^{\circ}\text{C} \pm 10^{\circ}\text{C}$   
( $284^{\circ}\text{F} \leftarrow 284^{\circ}\text{F} \rightarrow 302^{\circ}\text{F}$ )  
Temperature achieved -  $304^{\circ}\text{F}$

③ Cool in ice water bath < 3 minutes  
→ Achieved  $\leq 32^{\circ}$  in less than  
3 minutes

Result - Mixture is very  
stiff. Cannot be measured  
by lab viscometer with a T-Bar  
Texture of all-natural peanut  
butter without the oil mixed in.  
Product is a crumbly solid.

← picture of mixture  
looks "crumbly" and pink

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Malee Young  
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PROPRIETARY INFORMATION

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The goal is to make Deblassi patent example #12 with ingredients given, and by substituting hydrogenated jojoba with liquid jojoba, so that the major portion is solvent.

(A) Example 12 as written

Ingredients:

1. N,N'-Ethylenebisstearamide 20% 18.47g  
from Aldrich batch 03119KC

2. Hydrogenated jojoba oil 20% 18.47g  
from PNT Biobeads #2860  
Purcell Jojoba Co.

3. Poly (1-decene) 50% 51.73g  
from Aldrich batch # 28625JQ

4. PTFE 4% 3.69g  
from Eastman Resins Inc  
batch # PJ 3000183

Continued to page R-1-8

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PROPRIETARY INFORMATION

Continued from page R-1-7

① Example 12 with liquid Jojoba instead of hydrogenated

## Ingredients

1. N,N'-Ethylenebisstearamide 20.04 g  
from Aldrich batch 031191K
2. Jojoba Clean oil 20.04 g  
from Desert Oil LTD.
3. Poly(1-decene) 56.15 g  
from Aldrich batch 28625JQ
4. PTFE 4.01 g  
from Eastman Resins Inc  
batch PJ3000183

Both samples heated on hot plate with stirring both by magnetic stir bar and by hand. Samples heated to ~~240°~~ 280°F  $\pm$  4°F. This required 35 min for sample B (liquid Jojoba) and 41.5 min for Sample A.

Following heating samples were cooled in an ice bath with stirring (by hand) to below 100°F over 5 min.

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PROPRIETARY INFORMATION

TITLE Make Deblassi example #12 PROJECT Emollient Gel Patent work.

Continued from page R-1-8

Results: - Both samples are too stiff to measure with our viscometer with a T-Bar

Sample A - Solid Jojoba

- o a soft solid texture like a refrigerated cheddar cheese, ~~is possibly fat~~  
Product is compressable between the fingers.

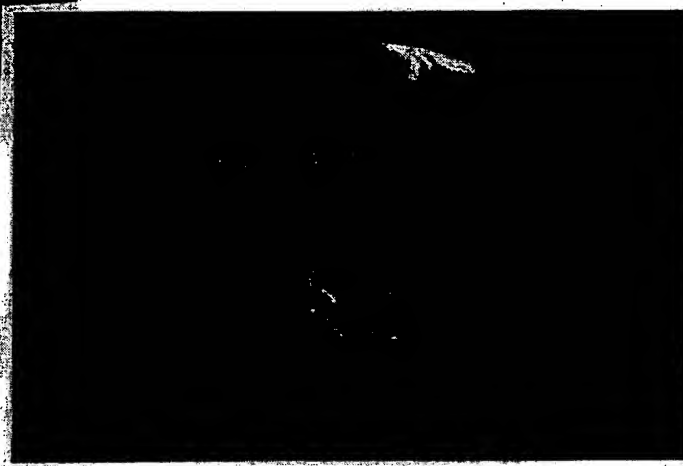
Sample B - liquid Jojoba

- o similar texture but softer - like soft ~~cream~~ cream cheese  
Product is Creamy. Too high viscosity to measure with a T-Bar



Photo of Sample A

Photo of Sample B



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